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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,525	02/15/2006	Mitsuhiro Kashiwabara	3712174.00517	2922
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EXAMINER				
BREVAIL, ELMITO				
ART UNIT		PAPER NUMBER		
2889				
NOTIFICATION DATE		DELIVERY MODE		
02/15/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

### Office Action Summary

**Application No.**

10/568,525

**Applicant(s)**

KASHIWABARA ET AL.

**Examiner**

ELMITO BREVAL

**Art Unit**

2889

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 8-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed on 12/28/2010 has been entered.

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 8-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 8-10, 12-14 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukuyama et al., (US. Pat: 6,831,406).

**Regarding claim 1**, Fukuyama ('406) teaches (in at least fig. 7; col. 8, lines 18-25) an organic EL device comprising an anode (10), a cathode (18), and an organic layer (14) including a plurality of light emitting layers (14a, 14b, and 14c) provided between the anode (10) and the cathode (18), wherein said light emitting layers comprise a red light emitting layer (14a) provided on the anode, a green light emitting

layer (14b) provided directly on the red light emitting layer (14a), and a blue light emitting layer (14c) provided directly on the green light emitting layer.

**Regarding claim 8**, Fukuyama ('406) teaches (in at least fig. 7; col. 8, lines 18-28; col. 14, lines 11-20) a display device comprising a color filter provided on light take-out surface side of an organic EL device for emitting white light, wherein said organic EL device comprises an organic layer (14) including a plurality of light emitting layers (14a, 14b, and 14c), said organic layer interposed between the anode (10) and the cathode (18); and said light emitting layers comprises a red light emitting layer (14a), a green light emitting layer (14b) and a blue light emitting layer (14c) laminated in respective order from the anode side.

**Regarding claim 9**, Fukuyama ('406) teaches (in at least fig. 7) the red light emitting layer (14a) is composed of a single layer.

**Regarding claim 10**, Fukuyama ('406) teaches (in at least fig. 7) the green light emitting layer (14b) is composed of a single layer.

**Regarding claim 12**, Fukuyama ('406) teaches (in at least fig. 7) the red light emitting layer (14a) supplies holes to the green light emitting layer (14b).

**Regarding claim 13**, Fukuyama ('406) teaches (in at least fig. 7) the blue light emitting layer (14c) supplies electrons to the green light emitting layer (14b; during recombination electrons from the blue light emitting layer will also form in the green light emitting layer).

**Regarding claim 14**, Fukuyama ('406) teaches (in at least fig. 7; col. 8, lines 18-28; col. 14, lines 11-20) an organic EL device comprising an anode (10), a cathode (18),

and an organic layer (14) including a plurality of light emitting layers provided between the anode (10) and the cathode (18), wherein said light emitting layers comprise a red light emitting layer (14a) provided on the anode, a green light emitting layer (14b) provided directly on the red light emitting layer, and a blue light emitting layer (14c) provided directly on the green light emitting layer, wherein each of said red light emitting layer (14a) and green light emitting layer (14b) is composed of a single layer.

**Regarding claim 17**, Fukuyama ('406) teaches (in at least fig. 7) the red light emitting layer (14a) has a hole transporting property, said green light emitting layer (14b) has a positive and negative charge transporting property, and said blue light emitting layer (14c) has an electron transporting property (all these properties will be held during recombination; also, note the materials that each layer is made out of in at least col. 8, lines 16-25).

**Regarding claim 18**, Fukuyama ('406) teaches (in at least fig. 7) the red light emitting layer (14a) has a hole transporting property, said green light emitting layer (14b) has a positive and negative charge transporting property, and said blue light emitting layer (14c) has an electron transporting property (all these properties will be held during recombination; also, note the materials that each layer is made out of in at least col. 8, lines 16-25).

**Regarding claim 19**, Fukuyama ('406) teaches (in at least fig. 7) the red light emitting layer (14a) has a hole transporting property, said green light emitting layer (14b) has a positive and negative charge transporting property, and said blue light emitting layer (14c) has an electron transporting property (all these properties will be

held during recombination; also, note the materials that each layer is made out of in at least col. 8, lines 16-25).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 16 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuyama et al., (US. Pat: 6,831,406) in view of Ebisawa et al., (US. Pub: 2004/0048100 A1).

**Regarding claim 16**, Fukuyama ('406) teaches (in at least fig. 7; col. 8, lines 18-25) an organic EL device comprising an anode (10), a cathode (18), and an organic layer (14) including a plurality of light emitting layers (14a, 14b, and 14c) provided between the anode (10) and the cathode (18), wherein said light emitting layers comprise a red light emitting layer (14a) provided on the anode, a green light emitting layer (14b) provided directly on the red light emitting layer (14a), and a blue light

emitting layer (14c) provided directly on the green light emitting layer and an electron transmitting blue light emitting layer (16) laminated in this order from the anode side, but silent about the blue light emitting layer comprises a positive and negative charge transporting blue light emitting layer.

However, it is well known in the art to use a blue light emitting layer that comprises a positive and negative charge transporting blue light emitting layer in order to have a device with improved luminance efficiency and long lifetime. For instance, Ebisawa ('100) teaches an organic electroluminescent device (title) comprised of, in part, a blue light emitting layer comprises a positive and negative transporting blue light emitting layer ([0075]).

At the time of the invention, it would have been obvious to one of ordinary skill in the art use the blue light emitting layer of Ebisawa in the device of Fukuyama for the purpose of providing a device with enhance luminance efficiency.

**Regarding claim 20**, Fukuyama ('406) as modified by Ebisawa ('100) teaches the blue light emitting layer comprises a positive and negative charge transporting blue light emitting layer ([0075] of Ebisawa) and an electron transmitting blue light emitting layer (16 of 17 Fukuyama) laminated in this order from the anode side.

**Regarding claim 21**, Fukuyama ('406) as modified by Ebisawa ('100) teaches the blue light emitting layer comprises a positive and negative charge transporting blue light emitting layer ([0075] of Ebisawa) and an electron transmitting blue light emitting layer (16 of 17 Fukuyama) laminated in this order from the anode side.

**Regarding claim 22**, Fukuyama ('406) as modified by Ebisawa ('100) teaches the blue light emitting layer comprises a positive and negative charge transporting blue light emitting layer ([0075] of Ebisawa) and an electron transmitting blue light emitting layer (16 of 17 Fukuyama) laminated in this order from the anode side.

Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuyama et al., (US. Pat: 6,831,406) in view of Suzuki et al., (US. Pat: 6,198,217) of record.

**Regarding claims 11 and 15**, Fukuyama ('406) teaches all the claimed limitations except for a protective film covering the organic layer.

Further regarding claims 11 and 15, Suzuki ('217) teaches an organic EL device comprised of, in part, a protective layer (P of fig. 1; col. 2, line 60) covering the organic layer for the purpose of having a device that is well protected against moisture/oxygen.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to contemplate of using the protective layer of Suzuki in the device of Fukuyama for the purpose of having a device that is well protected against moisture/oxygen.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELMITO BREVAL whose telephone number is (571)270-3099. The examiner can normally be reached on M-F (8:30 AM-5:00 Pm).



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Toan Ton can be reached on (571)-272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bumsuk Won/  
Primary Examiner, Art Unit 2889

February 8, 2011  
/Elmito Breval/  
Examiner, Art Unit 2889